



10-31-02

2621

Attorney's Docket No. 074451.P042X2

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Patent Application of:

Edward L. Schwartz

Application No.: 09/704,991

Filed: November 2, 2000

For: REVERSIBLE EMBEDDED
WAVELET SYSTEM
IMPLEMENTATION

Examiner: Unknown

Art Unit: 2621

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Commissioner for Patents
Washington, DC 20231

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Sir:

Enclosed is a copy of Information Disclosure Citation Form PTO-1449 together with copies of the documents cited on that form. It is respectfully requested that the cited documents be considered and that the enclosed copy of Information Disclosure Citation Form PTO-1449 be initialed by the Examiner to indicate such consideration and a copy thereof returned to applicant(s).

Pursuant to 37 C.F.R. § 1.97, the submission of this Information Disclosure Statement is not to be construed as a representation that a search has been made and is not to be construed as an admission that the information cited in this statement is material to patentability.

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_____ STATEMENT UNDER 37 C.F.R. §1.97(e) I hereby certify:

_____ That each item of information contained in the accompanying Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the Information Disclosure Statement, OR

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If there are any additional charges, please charge Deposit Account No. 02-2666.
Respectfully submitted,

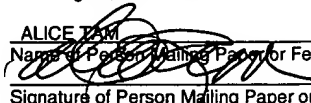
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: 10/29/02



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Los Angeles, CA 90025-1026
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<div style="position: relative; height: 100px;"> <div style="position: absolute; top: 0; left: 0; width: 100%; height: 100%; border: 1px solid black; border-radius: 50%; opacity: 0.5; pointer-events: none;"> PATENT & TRADEMARK OFFICE </div> <div style="position: absolute; top: 10%; left: 10%; font-weight: bold; font-size: 1.2em;">OCT 29 2002</div> </div>				Application Number		09/704,991
				Filing Date		November 2, 2000
				First Named Inventor:		Edward L. Schwartz
				Group Art Unit		2621
				Examiner Name		Unknown
Sheet 1 of 6		Attorney Docket Number		74451.P042X2		
U.S. PATENT DOCUMENTS						
Exam. Initial*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number Code ²	Kind (If known)			
	A	6118902		Knowles	09/12/2000	
	B	5867602		Zandi et al.	02/02/1999	
	C	5638498		Tyler et al.	06/10/1997	
	D	5602589		Vishwanath et al.	02/11/1997	
	E	5563960		Shapiro	10/08/1996	
	F	5546477		Knowles et al.	08/13/1996	
	G	5537493		Wilkinson	07/16/1996	
	H	5534925		Zhong	07/09/1996	
	I	5497435		Berger	03/05/1996	
	J	5453945		Tucker et al.	09/26/1995	
	K	5412741		Shapiro	05/02/1995	
	L	5381145		Allen et al.	01/10/1995	
	M	5379355		Allen	01/03/1995	
	N1	5347479		Miyazaki	09/13/1994	
	N2	5335016		Nakagawa	08/02/1994	
	O	5241395		Chen	08/31/1993	
	P	5235434		Wober	05/10/1993	
	Q	5148498		Resnikoff et al.	09/1992	
	R	5109451		Aono et al.	04/28/1992	
	S	4999705		Puri	03/12/1991	
	T	4922544		Stansfield et al.	05/01/1990	

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		Office ³	Number ⁴	Kind Code ⁵ (If known)				
	U	GB	2303031			06/25/1996		
	V	GB	2303030			06/25/1996		
	W	GB	2293734			07/09/1995		
	X	GB	2293733			07/09/1995		
	Y	UK	2285374	A		05/07/1995		
	Z	EP	0662741	A2		11/02/1994		
	AA	EP	0611051	A1		08/17/1994		

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT <small>(use as many sheets as necessary)</small>				Application Number	09/704,991	
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				Examiner Name	Unknown	
Attorney Docket Number	074451.P042X2					
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OTHER ART - NO PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
	MM	Mutsumi Ohta, Mitsuharu Yano and Takao Nishitani, "Wavelet Picture Coding with Transform Coding Approach", 1/31/99, pp. 776-785.	
	NN	French Search Report, FR9511024, 11/26/1996.	
	OO	French Search Report, FR9511023, 11/26/1996.	
	PP	Dutch Search Report, NO133082, 11/26/1996.	
	QQ	Calderbank, et al., "Wavelet Transforms That Map Integers to Integers", August 1996.	
	RR	Szu et al., "Image Wavelet Transforms Implemented by Discrete Wavelet Chips", July 1994, <u>Optimal Engineering</u> , Vol. 33, No. 7, pp. 2310-2325.	
	SS	Villasenor, et al., "Filter Evaluation and Selection in Wavelet Image Compression", <u>IEEE</u> , 1994, pp. 351-360.	
	TT	Denk, et al., "Architectures for Lattice Structure Based Orthonormal Discrete Wavelet Transforms", <u>IEEE</u> , 1994, pp. 259-270.	
	UU	Shapiro, "Embedded Image Coding Using Zerotrees of Wavelet Coefficients", <u>IEEE Transactions on Signal Processing</u> , 12/93, No. 12, pp. 3445-3462.	
	VV	Jie Chen, Shuichi Itoh, and Takeshi Nishitani, "Wavelet Picture Coding with Transform Coding Approach", 1/31/99, pp. 776-785.	
	WW	Padmanabhan, et al., "Feedback-Based Orthogonal Digital Filters", <u>IEEE Transactions on Circuits and Systems</u> , 8/93, No. 8, pp. 512-525.	
	XX	Said, et al., "Reversible Image Compression Via Multiresolution Representation and Predictive Coding", <u>SPIE</u> , Vol. 2094, 8/11/93, pp. 664-674.	

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Examiner Name	Unknown
Attorney Docket Number	074451.P042X2

Sheet 5 of 6

OTHER ART – NO PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
	YY	Said, et al., "Image Compression Using the Spatial-Orientation Tree", <u>IEEE</u> , 1993, pp. 279-282.	
	ZZ	Xiong, et al., "Joint Optimization of Scalar and Tree-Structured Quantization of Wavelet Image Decompositions", <u>IEEE</u> , 1/11/93, pp.891-895.	
	AAA	Howard et al., "Fast and Efficient Lossless Image Compression", <u>IEEE</u> , 1993, pp. 351-360.	
	BBB	Shapiro, J.M., "An Embedded Hierarchical Image Coder Using Zerotrees of Wavelet Coefficients", <u>IEEE</u> , 1993, pp. 214-223.	
	CCC	Cha Keon Cheong, Kyoharu Aizawa, Takahiro Saito and Mitsutoshi Hatori; "Subband Image Coding with Biorthogonal Wavelets"; 7/92; Pages 871-881	
	DDD	Antonini et al., "Image Coding Using Wavelet Transform", <u>IEEE Transactions on Image Processing</u> , Vol. 1, No. 2, April 1992, pp. 205-220.	
	EEE	Chui, et al., "Wavelets on a Bounded Interval", <u>Numerical Methods of Approximation Theory</u> , Vol. 9, 1992, pp. 53-75.	
	FFF	Shah et al., "A Chip Set for Lossless Image Compression", <u>IEEE Journal of Solid-State Circuits</u> , Vol. 26, No. 3, March 1991, pp. 237-244.	
	GGG	Langdon, Jr., Glen G., "Sunset: A Hardware-Oriented Algorithm for Lossless Compression of Gray Scale images", <u>SPIE Vol. 1444, Image Capture, Formatting, and Display</u> , 1991, p. 272-282.	
	HHH	A.S. Lewis and G. Knowles; "Image Compression Using the 2-D Wavelet Transform"; 11/15/90, Pages 244-250	
	III	Le Gall, et al., "Sub-band Coding of Digital Images Using Symmetric Short Kernal Filters and Arithmetic Coding Techniques", 1988, International Conference on Acoustics, Speech and Signal Processing, pp. 761-764.	

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Application Number

09/704,991

Filing Date

November 2, 2000

First Named Inventor:

Edward L. Schwartz

Group Art Unit

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Examiner Name

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Attorney Docket Number

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